

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A surface crosslinking treatment method of a water-absorbing resin powder comprising the steps of adding a surface crosslinking agent to a water-absorbing resin powder to form a mixture of the crosslinking agent and the powder; heat treating the mixture; and, after the heat treatment, stirring the water-absorbing resin powder mechanically or by controlled forced vibration generated by a mechanical vibrator and cooling it under a forced air flow.

2. (previously presented): A surface crosslinking treatment method of a water-absorbing resin powder comprising the steps of adding a surface crosslinking agent to a water-absorbing resin powder to form a mixture of the crosslinking agent and the powder; heating the mixture; and, after the heat treatment, cooling the water-absorbing resin powder under a forced air flow with mechanical stirring or stirring by vibration, and at the same time, removing at least a part of fine particles of the water-absorbing resin powder and/or the residual crosslinking agent with the forced air flow.

3. (canceled).

4. (original): The surface crosslinking treatment method of a water-absorbing resin powder as claimed in any one of claims 1 to 3, wherein the air flow is generated under a reduced pressure.

5. (previously presented): The surface crosslinking treatment method of a water-absorbing resin powder as claimed in Claim 1, wherein the water-absorbing resin powder is agglomerated after the heat treatment during the cooling step.

6 (currently amended): The surface crosslinking treatment method of a water-absorbing resin powder as claimed in any one of claims 1 to 3 and 5, wherein at least one of a ~~heat treatment machine for carrying out the heat treatment and a cooling machine for carrying out the cooling treatment~~ has is carried out with a machine having a downward inclination.

7. (currently amended): ~~A~~The surface crosslinking treatment method of a water-absorbing resin powder as ~~claimed in any one of claims 1 to 3 and 5~~comprising the steps of adding a surface crosslinking agent to a water-absorbing resin powder to form a mixture of the crosslinking agent and the powder; heat treating the mixture; and, after the heat treatment, stirring the water-absorbing resin powder mechanically or by vibration and cooling it under a forced air flow, wherein an aqueous solution is added to the water-absorbing resin powder in the cooling treatment.

8. (original): The surface crosslinking treatment method of a water-absorbing resin powder as claimed in claim 7, wherein the aqueous solution is added to the water-absorbing resin powder showing a piston flow at a temperature of from 40 to 100 °C during the cooling treatment.

9. (previously presented): The surface crosslinking treatment method of a water-absorbing resin powder as claimed in claim 7, wherein the addition of the aqueous solution is carried out using one or two or more of nozzles selected from nozzles having a spray pattern of a single-fluid or two-fluid flat spray, hollow cone or full cone.

10. (previously presented): The surface crosslinking treatment method of a water-absorbing resin powder as claimed in claim 7, wherein the aqueous solution contains at least one member selected from a deodorant, an anti-fungus agent, a colorant, a chelating agent, an inorganic salt, an acid, an alkali and a surfactant.

11. (currently amended): A~~The~~ surface crosslinking treatment method of a water-absorbing resin powder as ~~claimed in any one of claims 1 to 3 and 5~~comprising the steps of adding a surface crosslinking agent to a water-absorbing resin powder to form a mixture of the crosslinking agent and the powder; heat treating the mixture; and, after the heat treatment, stirring the water-absorbing resin powder mechanically or by vibration and cooling it under a forced air flow, wherein the cooling treatment is carried out by a low-speed stirring type cooling

machine provided with a plurality of paddles, and the water-absorbing resin powder is ~~fluidized~~
flowed in a piston flow in the cooling machine.

12. (previously presented): The surface crosslinking treatment method of a water-absorbing resin powder of claim 1, wherein the step of stirring the water-absorbing resin powder mechanically or by vibration and cooling it under a forced air flow comprises stirring the water-absorbing resin powder under a forced air flow while continuously or batchwise cooling the powder in a mixing machine having a forced cooling function.

13. (previously presented): The surface crosslinking treatment method of a water-absorbing resin powder of claim 1, wherein the step of stirring the water-absorbing resin powder mechanically or by vibration and cooling it under a forced air flow is conducted in a stirring device which has a rotation axis and is capable of stirring and cooling.

14. (previously presented): The surface crosslinking treatment method of a water-absorbing resin powder of claim 13, wherein the stirring device which has a rotation axis and is capable of stirring and cooling is a mixing machine capable of ventilating an air flow and having a cooling function.

15. (currently amended): ~~A~~The surface crosslinking treatment method of a water-absorbing resin powder comprising the steps of adding a surface crosslinking agent to a water-

absorbing resin powder to form a mixture of the crosslinking agent and the powder; heat treating the mixture; and, after the heat treatment, stirring the water-absorbing resin powder mechanically or by vibration and cooling it under a forced air flow~~of claim 14,~~

wherein the step of stirring the water-absorbing resin powder mechanically or by vibration and cooling it under a forced air flow is conducted in a~~wherein the~~ mixing machine which is a vessel-fixed type cooling machine provided with a rotational stirring blade capable of stirring the water-absorbing resin and which ventilates air flow.

16. (previously presented): The surface crosslinking treatment method of a water-absorbing resin powder of claim 1, wherein the step of stirring the water-absorbing resin powder mechanically or by vibration and cooling it under a forced air flow comprises a stirring operation in which mechanical vibration is imparted to the water-absorbing resin particles, thereby subjecting the particles to three-dimensional movement by vibration.

17. (previously presented): The surface crosslinking treatment method of a water-absorbing resin powder of claim 16, wherein the mechanical vibration is imparted to the water-absorbing resin particles with an eccentric motor or an electromagnet.

18. (new): A surface crosslinking treatment method of a water-absorbing resin powder comprising the steps of adding a surface crosslinking agent to a water-absorbing resin powder to form a mixture of the crosslinking agent and the powder; heating the mixture; and, after the heat

treatment, cooling the water-absorbing resin powder under a forced air flow with mechanical stirring or stirring by vibration, and at the same time, removing at least a part of fine particles of the water-absorbing resin powder and/or the residual crosslinking agent with the forced air flow, wherein an aqueous solution is added to the water-absorbing resin powder in the cooling treatment.

19. (new): The surface crosslinking treatment method of a water-absorbing resin powder as claimed in Claim 7, wherein the water-absorbing resin powder is agglomerated after the heat treatment during the cooling step.

20. (new): The surface crosslinking treatment method of a water-absorbing resin powder as claimed in Claim 18, wherein the water-absorbing resin powder is agglomerated after the heat treatment during the cooling step.

21. (new): The surface crosslinking treatment method of a water-absorbing resin powder as claimed in claim 18, wherein the aqueous solution is added to the water-absorbing resin powder showing a piston flow at a temperature of from 40 to 100 °C during the cooling treatment.

22. (new): The surface crosslinking treatment method of a water-absorbing resin powder as claimed in claim 18, wherein the addition of the aqueous solution is carried out using one or

two or more of nozzles selected from nozzles having a spray pattern of a single-fluid or two-fluid flat spray, hollow cone or full cone.

23. (new): The surface crosslinking treatment method of a water-absorbing resin powder as claimed in claim 18, wherein the aqueous solution contains at least one member selected from a deodorant, an anti-fungus agent, a colorant, a chelating agent, an inorganic salt, an acid, an alkali and a surfactant.

24. (new): A surface crosslinking treatment method of a water-absorbing resin powder comprising the steps of adding a surface crosslinking agent to a water-absorbing resin powder to form a mixture of the crosslinking agent and the powder; heating the mixture; and, after the heat treatment, cooling the water-absorbing resin powder under a forced air flow with mechanical stirring or stirring by vibration, and at the same time, removing at least a part of fine particles of the water-absorbing resin powder and/or the residual crosslinking agent with the forced air flow, wherein the cooling treatment is carried out by a low-speed stirring type cooling machine provided with a plurality of paddles, and the water-absorbing resin powder is flowed in a piston flow in the cooling machine.

25. (new): The surface crosslinking treatment method of a water-absorbing resin powder as claimed in Claim 11, wherein the water-absorbing resin powder is agglomerated after the heat treatment during the cooling step.

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26. (new): The surface crosslinking treatment method of a water-absorbing resin powder as claimed in Claim 24, wherein the water-absorbing resin powder is agglomerated after the heat treatment during the cooling step